

CLAIMS

1. A reduction device for a roll screen having a winding bar 110 of which a bracket 123 is formed on both side and a winding spring 122  
5 formed in the winding bar 110, wherein the roll screen 100 is wound or loosened as one end of the roll screen 100 is inserted into a screen-inserting groove 112 of a screen-inserting part 111 formed on the winding bar 110 in a longitudinal direction, comprising:

10 a fixing axis 200 installed in the winding bar 110, wherein one end of the fixing axis is combined with a bracket 123;

a damper 201 having an inserting groove 211 to insert a screen fixing part 111 of the winding bar 110, and having a spring 212 formed between the reduction nut 210 combined with the fixing axis 200 and an  
15 adjustor 120.

2. The device according to claim 1, wherein a cushion material 220 is formed between the reduction nut 210 of the damper 201 and the adjustor 120.

20 3. The device according to claim 1, wherein the damper 201 has a buffer 240 formed between the reduction nut 210 and the adjustor 120.

4. The device according to claim 1, wherein the damper 201 has a bellows 230 formed between the reduction nut 210 and the adjustor 120.

25 5. A reduction device for a roll screen having a winding bar 110 of which a bracket 123 is formed on both side and a winding spring 122 formed in the winding bar 110, wherein the roll screen 100 is wound or loosened as one end of the roll screen 100 is inserted into a screen-

inserting groove 112 of a screen-inserting part 111 formed on the winding bar 110 in a longitudinal direction, comprising:

a fixing axis 310 of which a screw thread part is formed on a peripheral surface and a combining groove 312 is formed at one end;

5 a rotating nut 320 combined with the screw thread part 311 of the fixing axis 310, wherein a plurality of fixing grooves 321 is formed on a peripheral surface of the rotating nut 320 and a rotating groove 323 having a screw thread part 323 is formed in a middle of the rotating nut 320;

10 a reduction part 330 inserted into the one end of the fixing axis, wherein a long guide groove is formed on the upper and the bottom surface of the reduction part 330, a compressive piston 332 is formed at the rear of the reduction part 330, and an elastic spring is combined with a peripheral surface of the reduction part 330;

15 a cylinder 340 of which a winding bar 110 is fixed at side-end and a combining groove 341 is formed on one end; and

a fixing groove combining the cylinder 340 and the fixing axis 310 with the long guide groove 331 of the reduction part 330.

20 6. The device according to claim 5, wherein the compressive piston 332 includes a U-shape transferring part 332a at the middle of the peripheral surface, an air-ejecting groove 332b at both sides of the bottom, and an air tight ring 332c combined with the transferring part 332a and opening and closing the air-ejecting groove 332b.

25 7. The device according to claim 5, wherein the rotating nut 320 forms a plurality of rotating balls 324 in the rotating groove 323 to rotate along with a screw hollow 311b.

8. The device according to claim 5, wherein the fixing axis 310 performs widely a pitch of the screw thread 311a.